**Daily Report**

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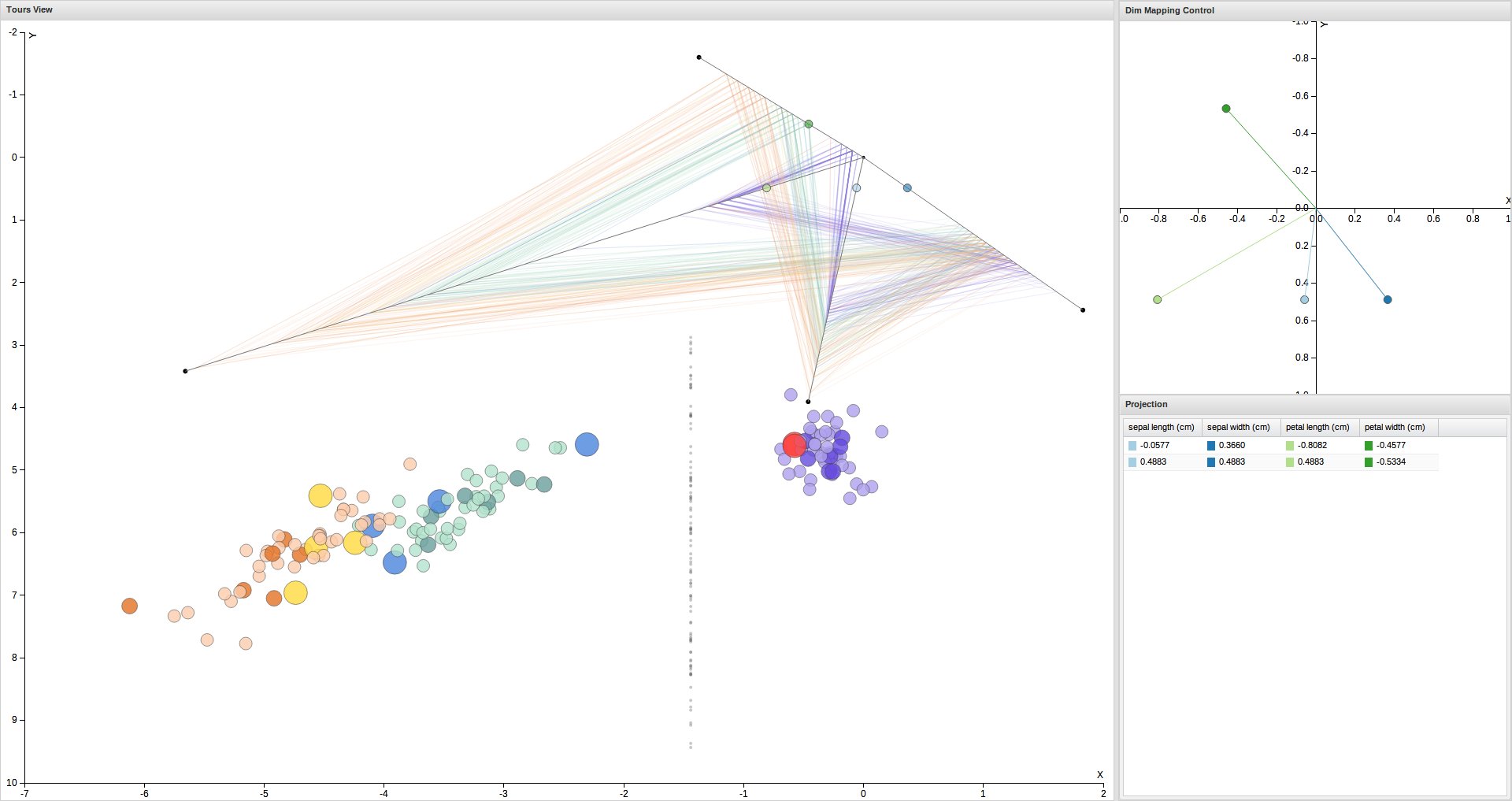
10.28.2013 – 11.03.2013

# Research

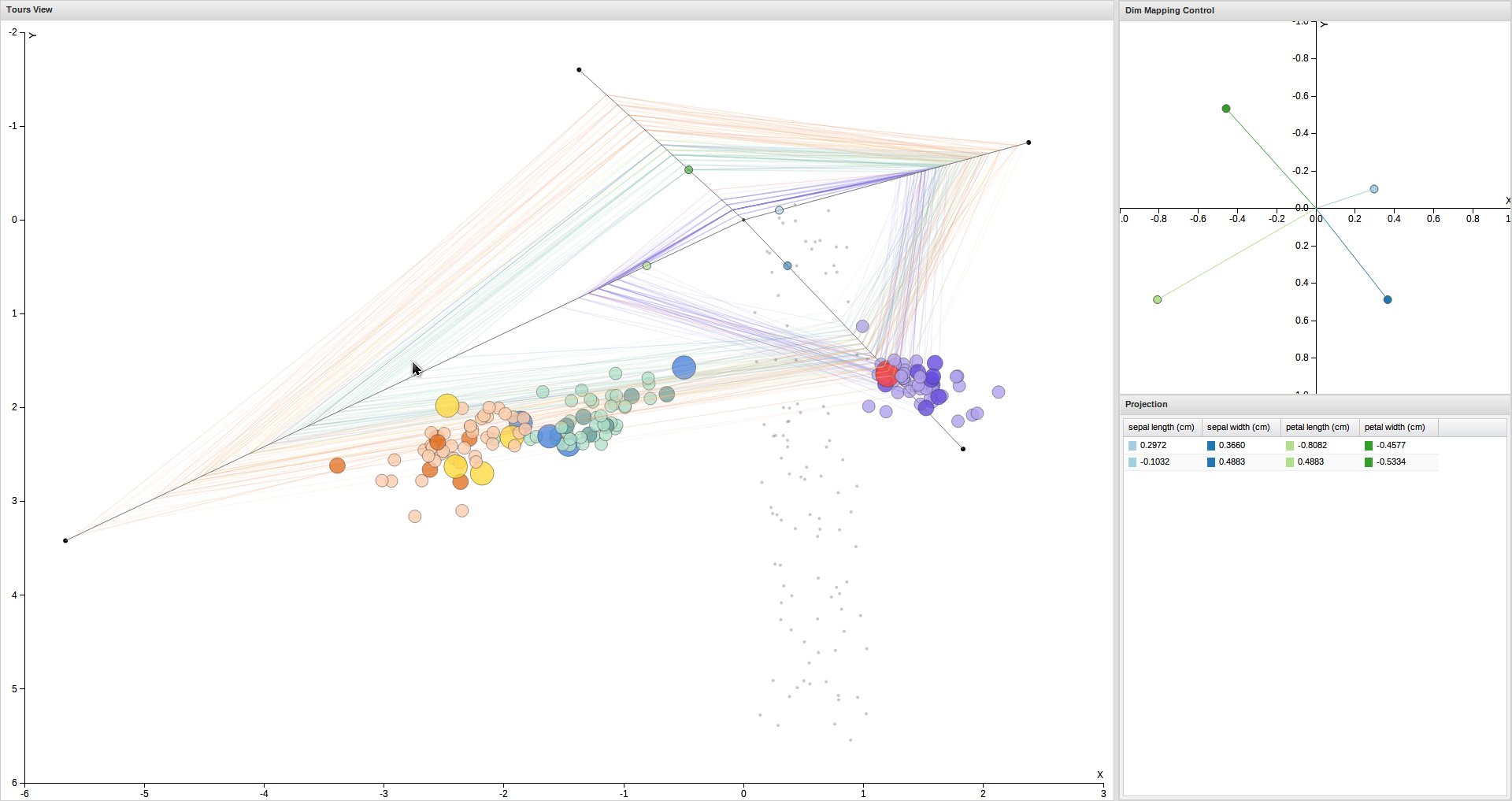
## Implementation

From Wednesday I was rewriting the codes because the previous implementation was just intended to show some instant results of tour and it is quite hard to add other features like filtering, data manipulation, and interaction with web server. It may take another 2 days to finish it.

Following figures shows the result of the star-like coordinates. Figure 1 is the initial viewport parallel to the separating plane; in figure 2, a dimension control point is moved to flatten the polylines. The clutter of polylines is another issue to resolve next.



Figure



Figure

## Model Selection View of Visual SVM

After discussing with Haidong on model selection, I made a draft of concept design of the model selection view. This view is intended to show an overview of the whole model selection and rule extraction process. Each model configuration, which includes its specific parameters and training data, is considered as a point in the high-dimensional parameter space. Here we visualize a model configuration as a node, and there relations as edges in a node-link graph.

* The edges can represent multiple kinds of meanings, like the parameter differences or result difference on a test dataset between two model configurations.
* The model configurations in the graph is either hand-crafted (parameter tuned or training data generated by human analyst) or automated (for instance, grid search of SVM parameters).
* From the relations between different configurations or partial order along a path there might be some specific patterns like direction of optimization or a semantic meaning of an increasing parameters, etc. (This graph can be regarded as an heterogeneous network.)

# Next Plans

* Finish the re-implementation.
* Continue working on the Model Selection View to try to add semantic information on the edges, paths.

# References

None.